

WHAT IS CLAIMED IS:

1. An electro-optical device, comprising:  
a connection terminal unit, including:  
a first insulating film formed over a substrate and planarized;  
a first conductive film formed over the first insulating film and that transmits at least a signal from an external circuit;  
a second insulating film formed over the first insulating film and planarized; and  
an opening formed in an area of the second insulating film that corresponds to the first conductive film and that extends to the first conductive film.
2. The electro-optical device according to Claim 1, further comprising:  
a switching element disposed in an image display area;  
a data line electrically coupled to the switching element;  
a pixel electrode electrically coupled to the switching element;  
a storage capacitor including a pixel-potential-side capacitor electrode electrically coupled to pixel potential of the pixel electrode, and a fixed-potential-side capacitor electrode opposed to the pixel-potential-side capacitor electrode through an insulating film; and  
a capacitance line formed above the data line and electrically coupled to the fixed-potential-side capacitor electrode, the capacitance line being formed over the first insulating film, and the first conductive film being formed of the same film as that of the capacitance line.
3. The electro-optical device according to Claim 1, a conductive film formed of the same film as that of any of wiring and an electrode that is deposited in an image display area, being formed beneath the first insulating film that corresponds to the connection terminal unit.
4. The electro-optical device according to Claim 1, the first conductive film forming a surface of the connection terminal unit coupled to a substrate that connects to the external circuit.
5. The electro-optical device according to Claim 1, a top surface of the second insulating film being flush with a top surface of the first conductive film.
6. The electro-optical device according to Claim 1, further comprising:  
a second conductive film electrically coupled to the first conductive film through the opening in the second insulating film.

7. The electro-optical device according to Claim 6, the second conductive film forming a surface of the connection terminal unit coupled to a substrate that connects to the external circuit.

8. The electro-optical device according to Claim 6,  
the opening in the second insulating film including a plurality of first contact holes; and

the first and second conductive films being electrically coupled to each other through the first contact holes.

9. The electro-optical device according to Claim 8, the plurality of first contact holes being formed in a manner of being dotted at least over the first conductive film.

10. The electro-optical device according to Claim 1, the first conductive film being electrically coupled to wiring that is electrically coupled to an internal circuit.

11. The electro-optical device according to Claim 10, the wiring electrically coupled to the internal circuit being formed over the first insulating film and being formed of a same film as that of the first conductive film.

12. The electro-optical device according to Claim 10, the wiring electrically coupled to the internal circuit being formed over a third insulating film that is under the first insulating film, and being electrically coupled to the first conductive film through a second contact hole.

13. The electro-optical device according to Claim 12, the second contact hole being formed under a periphery of the first conductive film.

14. The electro-optical device according to Claim 13, the second contact hole being positioned at an area overlapping with the second insulating film.

15. The electro-optical device according to Claim 12,  
the second contact hole including a plurality of second contact holes; and  
the plurality of second contact holes being formed in a manner of being dotted under the first conductive film.

16. The electro-optical device according to Claim 12,  
the data line being formed over the third insulating film; and  
the wiring electrically coupled to the internal circuit being formed of a same film as that of the data line.

17. The electro-optical device according to Claim 1, further comprising:  
a counter substrate opposed to the substrate and including a counter electrode;  
and

a pad formed of a same film as that of the first conductive film, the pad and the counter electrode being electrically coupled to each other through a conductive terminal.

18. An electro-optical device, comprising:

a connection terminal unit, including:

a first insulating film formed over a substrate;

a first conductive film formed over the first insulating film and that transmits a signal from an external circuit;

a second insulating film formed over the first insulating film and planarized; and

an opening formed in an area of the second insulating film that corresponds to the first conductive film and extends to the first conductive film; and

wiring formed over a third insulating film that is under the first insulating film and electrically coupled to the first conductive film through a contact hole, and an internal circuit.

19. The electro-optical device according to Claim 18, a top surface of the second insulating film being flush with a top surface of the first conductive film.

20. An electro-optical device, comprising:

a switching element disposed in an image display area;

a data line formed over a first insulating film and electrically coupled to the switching element;

a pixel electrode electrically coupled to the switching element;

a storage capacitor including a pixel-potential-side capacitor electrode electrically coupled to pixel potential of the pixel electrode, and a fixed-potential-side capacitor electrode opposed to the pixel-potential-side capacitor electrode through an insulating film;

a capacitance line formed over a second insulating film that is over the data line and electrically coupled to the fixed-potential-side capacitor electrode;

a third insulating film disposed over the capacitance line;

a connection terminal unit, including:

a first conductive film formed of a same film as that of the capacitance line over the second insulating film and transmitting a signal from an external circuit; and

an opening formed in an area of the third insulating film that corresponds to the first conductive film and extends to the first conductive film; and

wiring formed of a same film as that of the data line over the first insulating film and electrically coupled to the first conductive film through a contact hole, and an internal circuit.

21. A method of manufacturing an electro-optical device, comprising:
  - forming a first insulating film over a substrate and planarizing a surface of the first insulating film;
  - forming a first conductive film formed over the first insulating film and transmitting a signal from an external circuit;
  - forming a second insulating film over the first insulating film and the first conductive film and planarizing the second insulating film; and
  - removing an area of the second insulating film that corresponds to the first conductive film to uncover the first conductive film so as to form a connection terminal unit.
22. The method of manufacturing an electro-optical device according to Claim 21,
  - the first conductive film being formed simultaneously with a capacitance line formed in an image display area; and
  - the second conductive film being formed simultaneously with a data line formed in the image display area.
23. An electronic apparatus, comprising the electro-optical device according to Claim 1.